

600 INCIDENTALS

ITEM 602 - MASONRY

- 602.01 Description**
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602.01 Description. This work shall consist of furnishing all materials and constructing headwalls, pipe cradles, collars, and other masonry of the type and sizes specified.

602.02 Materials. Materials shall be as follows:

Concrete (Class C).....	499 and 511
Brick and masonry units.....	704.01, 704.02 and 704.03
Cement for mortar	701.01 through 701.07
Lime for mortar	712.04
Reinforcing steel.....	509.02
Sand for mortar.....	703.03
<i>Granular base and material.....</i>	<i>304</i>
<i>Nonshrink grout.....</i>	<i>705.20</i>

602.03 General. The designated item shall be constructed at the locations and to the dimensions, lines and grades specified.

Adequate precautions shall be taken to prevent concrete and mortar from freezing. Brick and masonry units having a temperature of 40°F (4°C) or less shall not be set with mortar until heated for a period sufficient to insure a temperature of 50° to 80°F (10° to 26°C) throughout the entire mass of the material. *Cure the exposed surfaces of all brick and block masonry by covering with wet burlap for 48 hours or by applying curing membrane according to Item 511.*

The excavation shall be of such dimensions in all cases as will give ample room for construction. The removal of any obstruction, which is necessary in the construction of the work, shall be done by the Contractor at no additional cost to the City. *For precast structure headwalls for pipes, slab footers, and cut-off walls, extend the excavation down 6 inches (150 mm) beyond the required bottom elevation and provide a granular base.*

The Contractor shall protect the sides of all excavations from caving by providing suitable sheeting, shoring, and bracing. Excavation shall be made by such methods that the original material below the bottom of footers will not be disturbed. *Use excavation*

methods that do not disturb the original material below the bottom of footers or below the additional 6 inches (150 mm) required for precast structures.

If the material found at the bottom of the headwall or below the additional 6 inches (150 mm) required for precast structures is not suitable for a foundation, excavate to further depth to provide a suitable foundation. Backfill the void left by the additional excavation with granular material.

Backfilling shall follow completion of the work as closely as the type of construction will permit. Earth shall be placed around the work in layers not exceeding 4 inches (102 mm) in thickness (loose measurement).

Compact according to Item 203 except for the following:

- (a) Use 95 percent compaction for acceptance.*
- (b) Use a minimum of 4 passes per lift.*
- (c) Use compaction equipment with a minimum total weight of or minimum centrifugal force of 1 ton (1 metric ton). Supply the manufacture's specifications for this equipment to verify these requirements.*

After the backfilling has been completed, the Contractor shall immediately remove all surplus material and all dirt and rubbish from the site. Surplus excavation and other materials shall be disposed of *by the Contractor at no additional charge to the City.*

Concrete headwalls, concrete cradles and other concrete masonry shall be constructed of the materials and by the methods as described under Sections 499 and 511 and shall be Class C. Reinforcing steel shall be placed as prescribed under Section 509.

When using precast structures, conform to the following:

Use precast structures conforming to the City Standard Drawings, or submit shop drawings, accompanied by calculations, and stamped by a Professional Engineer registered in the State of Ohio.

Block or brick walls shall be of the thickness called for on the plans. Blocks or bricks shall be thoroughly wetted before laying in mortar. They shall be laid up with full mortar joints. The mortar shall be composed of one part of Portland cement to two parts of sand by volume, to which lime may be added in an amount not to exceed 10 percent of the cement by weight, or the mortar shall be composed of one part of masonry cement to two parts of sand by volume.

602.04 Method of Measurement. Masonry will be measured by the cubic yard (cubic meter). Quantities will be determined by calculations from dimensions shown on the plans or as ordered by the Engineer.

602.05 Basis of Payment. The accepted quantities of masonry will be paid for at the contract price designated for each of the pay items listed below and included in the proposal. The prices shall be full compensation for all materials including excavation, backfill, disposal of surplus materials, reinforcing steel where specified and for other incidentals necessary for completion of the items. *When a precast structure is used, payment is based on the number of cubic yards (cubic meters) required for the cast in place item and is considered full compensation for construction of the precast structure.*

Payment will be made at the contract price for:

Item	Unit	Description
602	Cubic Yard (Cubic Meter)	Brick Masonry
602	Cubic Yard (Cubic Meter)	Block Masonry
602	Cubic Yard (Cubic Meter)	Concrete Masonry